

L4 ANSWER 44 OF 50 CA COPYRIGHT 2009 ACS on STN

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TI Calcium sodium silicate glass compositions, hollow
microspheres obtained from the glass, and process for their
manufacture

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SO Fr. Demande, 17 pp.

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DT Patent

LA French

IC ICM C03C003-089

CC 57-1 (Ceramics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2671072	A1	19920703	FR 1990-14135	19901114
	FR 2671072	B1	19931203		
PRAI	FR 1990-14135			19901114	

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2671072	ICM	C03C003-089	
	IPCI	C03C0003-089 [ICM,5]; C03C0003-076 [ICM,5,C*]	
	IPCR	C03B0019-00 [I,C*]; C03B0019-10 [I,A]; C03C0003-076 [I,C*]; C03C0003-093 [I,A]; C03C0011-00 [I,C*]; C03C0011-00 [I,A]	
	ECLA	C03B019/10C2; C03C003/093; C03C011/00B	
AB	The glass contains SiO ₂ 55-80, B ₂ O ₃ 5-15, Al ₂ O ₃ 3-8, Li ₂ O 0-2, K ₂ O 0-2, Na ₂ O 11-16 (Li ₂ O + K ₂ O + Na ₂ O 11-18), MgO 0-1, CaO 0.1-3, BaO 0-6, ZnO 1-5 (MgO + CaO + BaO + ZnO 3-14), fluoride 0-5, and sulfate 0.3-0.8 weight%. The lightwt. hollow microspheres have d. <0.7 g/cm ³ , and are obtained by thermal expansion of particles of the soda-lime glass. The process comprises dispersing the particles in a gas stream, passing the loaded gas stream through flame at ≥1500° to expand the particles and form the hollow microspheres, and quenching the hollow microspheres. The glass is obtained by elec. melting the composition using Mo electrodes. The hollow microspheres are resistant to elevated pressures, and are suitable for use in synthetic resins and concrete.		
ST	soda lime glass hollow microsphere; calcium sodium silicate glass microsphere		
IT	Glass, oxide		